# Commonwealth of Kentucky Environmental and Public Protection Cabinet Department for Environmental Protection

Division for Air Quality 803 Schenkel Lane Frankfort, Kentucky 40601 (502) 573-3382

# **Proposed**

# AIR QUALITY PERMIT Issued under 401 KAR 52:020

Permittee Name: Carbide Industries, LLC

Mailing Address: P.O. Box 67

Calvert City, KY 42029

Source Name: Carbide Industries, LLC

Mailing Address: P.O. Box 67

Calvert City, KY 42029

Source Location: 3204 Inustrial Parkway, KY HWY 1523

Calvert City, KY 42029

Permit Number: V-05-067 Source A. I. #: 2928

Activity #: APE20040001 Review Type: Title V, Initial Source ID #: 21-157-00025

**Regional Office:** Paducah

4500 Clarks River Road Paducah, KY 42003-0823

(270) 898-8468

**County:** Marshall

**Application** 

Complete Date: August 8, 2000 Issuance Date: April 11, 2007

**Revision Date:** 

**Expiration Date:** April 11, 2012

John S. Lyons, Director Division for Air Quality

# TABLE OF CONTENTS

SECTION	DATE OF ISSUANCE	PAGE
A. PERMIT AUTHORIZATION	Initial	1
B. EMISSION POINTS, EMISSIONS UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS	Initial	2
C. INSIGNIFICANT ACTIVITIES	Initial	17
D. SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS	Initial	25
E. SOURCE CONTROL EQUIPMENT OPERATING REQUIREMENTS	Initial	26
F. MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS	Initial	27
G. GENERAL PROVISIONS	Initial	30
H. ALTERNATE OPERATING SCENARIOS	Initial	35
I. COMPLIANCE SCHEDULE	Initial	35
J. ACID RAIN	Initial	35
K. NOx BUDGET	Initial	35

**Permit Number:** <u>V-05-067</u> **Page:** 1 **of** 35

# **SECTION A - PERMIT AUTHORIZATION**

Pursuant to a duly submitted application the Kentucky Division for Air Quality hereby authorizes the operation of the equipment described herein in accordance with the terms and conditions of this permit. This permit has been issued under the provisions of Kentucky Revised Statutes Chapter 224 and regulations promulgated pursuant thereto.

The permittee shall not construct, reconstruct, or modify any affected facilities without first submitting a complete application and receiving a permit for the planned activity from the permitting authority, except as provided in this permit or in 401 KAR 52:020, Title V Permits.

Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by this Cabinet or any other federal, state, or local agency.

**Permit Number:** <u>V-05-067</u> **Page:** 2 **of** 35

# SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS

PA-1 (07) Process Area 1: Coke Dryer

**Description:** 

Coke Dryer: Fired on arc furnace CO off-gas or natural gas

Maximum continuous rating: 22 mmBtu/hr, 73,000 tons coke per year

Construction Commenced: 1981

Control Equipment: Particulate (PM) emissions are controlled by a dust collector /

baghouse

### **APPLICABLE REGULATIONS:**

401 KAR 59.010, New process operations.

## 1. Operating Limitations:

None

# 2. <u>Emission Limitations</u>:

a. Opacity Limitations:

401 KAR 59:010, Section 3(1)(a), the opacity of visible emissions shall not equal or exceed twenty (20) percent.

b. Particulate Matter Limitations:

401 KAR 59:010, Section 3(2), particulate emissions shall not exceed the allowable emission rate calculated by the following formula:

$$E=3.59P^{0.62}$$

E = rate of emission of particulate matter (lb/hr)

P = process weight rate in (tons/hr) = monthly throughput in tons / monthly hours of operations

#### **Compliance Demonstration Methods:**

a. For the particulate matter standards:

Compliance with particulate matter emission limitations specified in 59:010 shall be demonstrated by monitoring the amount and type material (tons per month) added to the emission unit and total hours the unit operated that month.

Compliance with the hourly emission limit shall be determined as follows:

Hourly Emission Rate (lb/hr) = [Monthly product produced (tons/month) x Emission Factor as determined from AP-42 \* (lb/hr) / Hours of operation per month (hrs/month)] x (1 - Control Efficiency)

- \* If an Emission Factor other than that taken from AP-42 is used, documentation on how that Emission Factor was derived must be submitted to the Division's Central Office for approval.
- b. For visible emissions:

Refer to **4.** <u>Specific Monitoring Requirements</u> and **5.** <u>Specific Recordkeeping Requirements</u>.

Permit Number: V-05-067 Page: 3 of 35

# SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

### 3. Testing Requirements:

The permittee shall perform emission testing within 60 days of receipt of a written request from the Division. The testing shall be performed in accordance with the applicable methods referenced in 401 KAR 59:010, Section 4.

# 4. Specific Monitoring Requirements:

- a. The permittee shall monitor on a monthly basis:
  - i. material process rate;
  - ii. material produced; and
  - iii. operation hours for each emission unit.
- b. To demonstrate compliance with opacity standards specified in 401 KAR 59:010 the permittee shall:
  - i. perform opacity readings using Reference Method 9 on each stack or vent as requested by the Division.
  - ii. perform qualitative visual observations of the opacity of emissions from each stack/vent biweekly. If visible emissions are observed from any stack/vent during the observations perform opacity readings using Reference Method 9.
- c. The facility shall monitor the pressure drop across the baghouse weekly and ensure all parameters remain within the range recommended by the manufacturer and/or standard operating practices.

### 5. Specific Recordkeeping Requirements:

- a. Monthly records shall be maintained of the following information:
  - i. material process rate;
  - ii. material produced; and
  - iii. operation hours for each emission unit.
- b. The permittee shall maintain a log of the biweekly visual observations. The log shall note:
  - i whether any air emissions (except for water vapor) were visible from the vent/stack, and
  - ii. all emission points from which visible emissions occurred.
- c. The permittee shall maintain a log of the dates and times of each Method 9 test and either the results of the test or reasons for not performing a Method 9 test.
- d. Weekly logs of the visual inspection, pressure drop monitoring, and the preventative maintenance of the baghouse shall be maintained.

# **Specific Reporting Requirements:**

Refer to **Section F(5)**.

#### 7. Specific Control Equipment Operating Conditions:

The baghouse(s) shall be operated and maintained according to manufacturer's recommendation.

**Permit Number:** <u>V-05-067</u> **Page:** 4 **of** 35

# SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

## PA-1 (see Table PA-1.1) Process Area 1: Submerged Electric Arc Furnace

**Description:** 35 megawatt 3-phase submerged electric arc furnace, semi-sealed

Construction commenced: 1980

Control Equipment: Off-gasses are vented to a Kinpactor scrubber followed by cyclonic separator to a compressor to the Coke Dryer or Flare. PM emissions from the furnace are controlled by an 8-baghouse system.

Table PA-1.1. Emission points associated with the Submerged Electric Arc Furnace.

Associated EP	EP Description
EP 36	Furnace Tapping Hood 196
EP 37	Furnace Hood 19A
EP 40	Furnace Dust Collector SW Fan
EP 41	Furnace Dust Collector SE Fan
EP 42	Furnace Dust Collector NW Fan
EP 43	Furnace Dust Collector NE Fan
EP 55	Furnace Flare Stack

#### **APPLICABLE REGULATIONS:**

401 KAR 60:005 Section 3(1)(gg), incorporating by reference 40 CFR 60 Subpart Z, *Standards of Performance for Ferroalloy Production Facilities*.

401 KAR 63:015, Flares

#### 1. Operating Limitations:

None

# 2. <u>Emission Limitations</u>:

a. Carbon monoxide limitations:

40 CFR 60.263(a), the permittee shall not emit gases which contain, on a dry basis, 20 or greater volume percent carbon monoxide.

b. Sulfur dioxide limitations:

None.

- c. Particulate matter limitations:
  - i. 40 CFR 60.262(a)(2), the permittee shall not emit from the particulate matter from the control device in excess of 0.23 kg/MW-hr (0.51 lb/MW-hr) while calcium carbide is being produced.
- d. Opacity limitations:
  - i. 40 CFR 60.262(a), the permittee shall not cause to be discharged into the atmosphere from any electric submerged arc furnace any gases which:
    - A. Exit a control device and exhibit 15 percent opacity or greater;

Permit Number: V-05-067 Page: 5 of 35

# SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

- B. Exit from an electric arc furnace and escape the capture system and be visible without the aid of instruments during periods when flow rates are being established under §60.265(d);
- C. Escape the capture system at the tapping stations and are visible without the aid of instruments for more than 40 percent of each tapping period only during the periods when flow rates are being established under §60.265(d). No opacity limit applies when a blowing tap occurs.
- ii. 40 CFR 60.262(b), the permittee shall not cause the discharged into the atmosphere from any dust-handling equipment any gases which exhibit 10 percent opacity or greater.
- iii. 401 KAR 63:015 Section 3, emissions of particulate matter from any flare shall not exceed twenty (20) percent opacity for more than three (3) minutes in any one (1) day.

### **Compliance Demonstration:**

a. Carbon monoxide:

40 CFR 60.263(a), flaring of or combustion of carbon monoxide as fuel in the coke drying process EP PA-1 (07) constitutes compliance.

b. Sulfur Dioxide:

None

- c. Particulate matter:
  - i. Compliance with particulate matter limitations specified in 40 CFR 60.262(a)(2) is demonstrated through monitoring of operations specified in 40 CFR 60.265 and performance testing as specified in 40 CFR 60.266. Refer to Condition 3. <u>Testing Requirements</u> and Condition 4. <u>Specific Monitoring Requirements</u> below.

Compliance with the hourly emission limit shall be determined as follows:

Hourly Emission Rate (lb/hr) = [Monthly product produced (tons/month) x Emission Factor as determined from AP-42 \* (lb/hr) / Hours of operation per month (hrs/month)] x (1 - Control Efficiency)

\* If an Emission Factor other than that taken from AP-42 is used, documentation on how that Emission Factor was derived must be submitted to the Division's Central Office for approval.

#### d. Opacity:

- i. Compliance is assumed by meeting 40 CFR 60.262(a).
- ii. 401 KAR 63:015, refer to **4.** Specific Monitoring Requirements and **5.** Specific Recordkeeping Requirements.
- iii. 40 CFR 60.264, refer to Conditions **4.** Specific Monitoring Requirements and **6.** Specific Reporting Requirements.

Permit Number: V-05-067 Page: 6 of 35

# SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

## 3. <u>Testing Requirements:</u>

a. Carbon monoxide: No testing is required.

- b. Stack testing for sulfur dioxide shall be performed no later than 12 months after the final permit is issued and using the reference specified in 401 KAR 50:015.
- c. Emission testing for particulate matter shall be performed at least once per permit term as follows:
  - i. 40 CFR 60.266(a), during any performance test required in §60.8, the owner or operator shall not allow gaseous diluents to be added to the effluent gas stream after the fabric in an open pressurized fabric filter collector unless the total gas volume flow from the collector is accurately determined and considered in the determination of emissions.
  - ii. 40 CFR 60.266(b), in conducting performance tests required by §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of Part 60 or other methods specified in 40 CFR 60.266, except as provided in §60.8(b).
  - iv. 40 CFR60.266(c), compliance with particulate standards in §60.262 shall be determined as follows:
    - A. The emission rate (E) of particulate matter shall be computed for each run using the following equation:

$$E = \left[\sum_{i=1}^{N} C_{si} Q_{sdi}\right] / (PK)$$

E = emission rate of particulate matter, kg/MW-hr (lb/MW-hr).

n = total number of exhaust streams at which emissions are quantified.

Csi = concentration of particulate matter from exhaust stream "i", g/dscf (gr/dscf).

Qsdi = volumetric flow rate of effluent gas from exhaust stream "i", dscm/hr (dscf/hr).

P = average furnace power input, MW.

K = conversion factor, 1000 g/kg (7000 gr/lb).

B. Method 5 shall be used to determine the particulate matter concentration (Csi) and volumetric flow rate (Qsdi) of the effluent gas, except that the heating systems specified in section 6.1.1.2 and 6.1.1.6 are not to be used when the carbon monoxide content of the gas stream exceeds 10 percent by volume dry basis. If the flare is used to comply with §60.263, the sampling site shall be located upstream of the flare. The sampling time shall include an integral

**Permit Number:** <u>V-05-067</u> **Page:** 7 **of** 35

# SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

number of furnace cycles. When sampling emissions from other types of installations, the sampling time and sample volume for each run shall be at least 200 minutes and 5.66 dscm (200 dscf).

- C. The measurement device of §60.265(b) shall be used to determine the average furnace input (P) during each run.
- D. Method 9 and the procedures in §60.11 shall be used to determine opacity.
- E. The emission rate correction factor, integrated sampling procedure of Method 3B shall be used to determine the CO concentration. The sample shall be taken simultaneously with each particulate matter sample.
- v. During the PM run, the maximum open hood area (in hoods with segmented or otherwise movable sides), under which the process is expected to be operated and remain in compliance with all standards, shall be recorded. Any future operation of the hooding system with open areas in excess of the maximum is not permitted.
- vi. To comply with §60.265(d) or (f), the owner or operator shall use the monitoring devices in §60.265(c) or (e) to make the required measurements as determined during the performance test.

## d. Opacity:

The permittee shall perform Reference Method 9 as specified under Condition

4. Specific Monitoring Requirements.

### 4. Specific Monitoring Requirements:

The facility is required to install continuous opacity monitors and continuous power input and flow rate monitors on the submerged electric arc furnace and associated control devices as specified in 40 CFR 60 Subpart Z. Therefore Carbide Industries will be required to develop a CAM Plan for submittal in conjunction with the permit renewal application at least 180 days before this permit expires.

- a. 40 CFR 60.264(a), the owner or operator shall install, calibrate, maintain and operate a continuous monitoring system for measurement of the opacity of emissions discharged from the control device(s).
- b. 40 CFR 60.265(b), the owner or operator shall install, calibrate, maintain and operate a device to measure and continuously record the furnace power input. The device may measure the input at the output or input side of the transformer. The device shall have an accuracy of  $\pm 5$  percent over its operating range.
- c. 40 CFR 60.265(c), the owner or operator shall install, calibrate, maintain and operate a monitoring device that continuously measures and records the volumetric flow rate through each separately ducted hood of the capture system, except as provided under \$60.265(e). The device shall be installed in any appropriate location in the exhaust duct such that reproducible flow rate monitoring will result. The device shall have an accuracy of  $\pm 10$  percent over its normal operating range and be calibrated according to manufacturer's instructions. The owner or operator may be required to demonstrate the accuracy relative to Methods 1 and 2 of 40 CFR 60, Appendix A.
- c. 40 CFR 60.265(d), when performance tests are conducted to demonstrate compliance with particulate emissions standard, the volumetric flow rate through each separately ducted hood of the capture system must be determined using the monitoring device required by §60.265(c). The volumetric flow rates must be determined for furnace

Permit Number: V-05-067 Page: 8 of 35

# SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

power input levels at 50 and 100 percent of the nominal rated capacity of the furnace. At all times the furnace is operated, the volumetric flow rate shall be maintained at or above the appropriate level determined during the most recent performance test. If emissions from tapping are captured and ducted separately from emissions of the furnace, during each tapping period the volumetric flow rates through the capture system over the tapping station shall be maintained at or above levels established during the most recent performance test. Operation at lower flow rates may be considered unacceptable operation and maintenance of the affected facility. The permittee may request reestablishing flow rates by conducting new performance testing.

- e. 40 CFR 60.265(e), as an alternative to 40 CFR 60.265(c) the owner or operator may determine the volumetric flow rate through each fan of the capture system from fan power consumption, pressure drop across the fan and fan performance curve. The owner or operator shall maintain on file a permanent record of the fan performance curve (prepared for a specific temperature) and shall:
  - i. Install, calibrate, maintain, and operate a device to continuously measure and record the power consumption of the fan motor (measured in kW);
  - ii. Install, calibrate, maintain, and operate a device to continuously measure and record the pressure drop across the fan. The power consumption and pressure drop measurements must be synchronized to allow real time comparisons of the data. The device must have an accuracy of  $\pm 5$  percent over the normal operating range.
- f. 40 CFR 60.265(f), the volumetric flow rate through each fan of the capture system must be determined from the power consumption, fan pressure drop, and fan performance curve as specified in 40 CFR 60.265(e) during any performance test conducted to demonstrate compliance with particulate emissions standard. volumetric flow rate shall be determined at a representative temperature for furnace power input levels of 50 and 100 percent of the nominal rated capacity of the furnace. At all times the furnace is operated, the fan power consumption and fan pressure drop shall be maintained such that the volumetric flow rate is at or above the levels established during the most recent performance test for the furnace power level. If emissions from tapping are captured and ducted separately from emissions of the furnace, during each tapping period the fan power consumption and fan pressure drop shall be maintained such that the volumetric flow rate is at or above levels established during the most recent performance test. Operation at lower flow rates may be considered unacceptable operation and maintenance of the affected facility. The permittee may request reestablishing flow rates by conducting new performance testing. The Administrator may require verification of the fan performance curve by monitoring necessary fan operating parameters and determine the gas volume moved relative to Methods 1 and 2 of 40 CFR 60 Appendix A.
- g. 40 CFR 60.265(g), all monitoring devices required under 40 CFR 60.265(c) and 40 CFR 60.265(e) are to be checked for calibration annually in accordance with the procedures under §60.13(b).
- h. The permittee shall monitor on a monthly basis:
  - i. material process rate;
  - ii. material produced; and

Permit Number: V-05-067 Page: 9 of 35

# SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

iii. operation hours for each emission unit.

# 5. **Specific Recordkeeping Requirements:**

- a. 40 CFR 60.265(a), monthly records shall be maintained of the following information:
  - i. material process rate;
  - ii. material produced; and
  - iii. operation hours for each emission unit;
  - iv. time and duration of each tapping period and identification of material tapped (slag or product);
  - v. all furnace power input data obtained under §60.265(b);
  - vi. all flow data obtained under §60.265(c) or all fan motor power consumption and pressure drop data obtained under §60.265(e).

## **Specific Reporting Requirements:**

- a. 40 CFR 60.264(b), for the reports required by §60.7(c), the owner or operator shall report excess emissions for all six-minute periods in which the average opacity is 15 percent or greater.
- b. 40 CFR 60.264(c), the owner or operator shall submit a report of any product change to the Administrator. Reports of product changes must be postmarked not later than 30 days after implementation of the product change.

### 7. Specific Control Equipment Operating Conditions:

Refer to Condition **4.** Specific Monitoring Requirements d. and f. for capture system operating requirements. [40 CFR 60.265(d) and (f)]

Permit Number: V-05-067 Page: 10 of 35

# SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

#### PA-2 (140) Process Area 2: Paste Plant Ball Mill

## **Description:**

Calcined Coal Ball Mill

Maximum continuous rating: 1.6 tons calcined coal per hour

Construction Commenced: 1979

Control Equipment: Particulate matter is controlled by a dust collector/baghouse.

### **APPLICABLE REGULATIONS:**

401 KAR 59:010, New process operations.

### 1. **Operating Limitations:**

None

### 2. Emission Limitations:

a. Particulate Limitations:

401 KAR 59:010, Section 3(2), particulate emissions shall not exceed the allowable emission rate as calculated by the following formula:

$$E=3.59P^{0.62}$$
 lbs/hr

E = rate of emission of particulate matter (lb/hr)

P = process weight rate in (tons/hr) = monthly throughput in tons / monthly hours of operations

#### b. Opacity Limitations:

401 KAR 59:010, Section 3(1)(a) the opacity of visible emissions shall not equal or exceed twenty (20) percent.

#### **Compliance Demonstration Methods:**

a. Particulate matter:

Compliance with particulate matter emission limitations specified in 401 KAR 59:010 shall be demonstrated by monitoring the amount and type material (tons per month) added to the emission unit and total hours the unit operated that month.

Compliance with the hourly emission limit shall be determined as follows:

Hourly Emission Rate (lb/hr) = [Monthly material processed (tons/month) x Emission Factor as determined from AP-42 \* (lb/hr) / Hours of operation per month (hrs/month)] x  $(1 - Control \ Efficiency)$ 

\* If an Emission Factor other than that taken from AP-42 is used, documentation on how that Emission Factor was derived must be submitted to the Division's Central Office for approval.

#### b. Opacity:

Refer to 4. <u>Specific Monitoring Requirements</u> and 5. <u>Specific Recordkeeping</u> Requirements.

Permit Number: V-05-067 Page: 11 of 35

# SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

### 3. Testing Requirements:

The permittee shall perform emission testing within 60 days of receipt of a written request from the Division. The testing shall be performed in accordance with the applicable methods referenced in 401 KAR 59:010, Section 4.

# 4. **Specific Monitoring Requirements:**

- a. The permittee shall monitor on a monthly basis:
  - i. material process rate; and
  - ii. operation hours for each emission unit.
- b. To demonstrate compliance with opacity standards specified in 401 KAR 59:010 the permittee shall:
  - i. perform opacity readings using Reference Method 9 on each stack or vent as requested by the Division.
  - ii. perform qualitative visual observations of the opacity of emissions from each stack/vent Biweekly. If visible emissions are observed from any stack/vent during the observations perform opacity readings using Reference Method 9.

### 5. **Specific Recordkeeping Requirements:**

- a. Monthly records shall be maintained of the following information:
  - i. monthly material process rate, and
  - ii. monthly operation hours for each emission unit.
- b. Weekly logs of the visual inspection, pressure drop monitoring, and the preventative maintenance of the baghouse.

#### **6.** Specific Reporting Requirements:

Refer to **Section F(5)**.

**Permit Number:** <u>V-05-067</u> **Page:** 12 **of** 35

# SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

## **Process Steam Generating Boilers**

**EP 02 (104)** Fulton VMP50 process steam generator

Maximum rated capacity: 2.009 mmBtu/hr

# **Description:**

Construction Commenced: October 2003

Fuel Source: natural gas Control Equipment: None.

### **APPLICABLE REGULATIONS:**

401 KAR 59:015, New indirect heat exchangers.

### 1. Operating Limitations:

None

## 2. <u>Emission Limitations</u>:

a. Particulate Standard:

401 KAR 59:015, Section 4(1)(a), particulate emissions shall not exceed the allowable emission rate of 0.56 lb/mmBtu based on source wide heating value of 2.009 mmBtu/hr.

# b. Opacity Standard:

401 KAR 59:015, Section 4(2) the opacity of visible emissions shall not equal or exceed twenty (20) percent, except:

- i. A maximum of forty (40) percent opacity shall be permissible for not more than six (6) consecutive minutes in any sixty (60) consecutive minutes during cleaning the fire box or blowing soot.
- ii. Emissions during building a new fire for the period required to bring the boiler up to operating conditions provided the method used is that recommended by the manufacturer and the time does not exceed the manufacturer's recommendations.

# c. Sulfur Dioxide Standard:

401 KAR 59:015, Section 5(1)(a), sulfur dioxide emissions shall not exceed the allowable emission rate of 3.0 lb/mmBtu based on source wide heating value of 2.009 mmBtu/hr.

## **Compliance Demonstration Methods:**

- a. Particulate matter:
  - i. Compliance with the particulate limit is demonstrated while burning natural gas based on AP-42 emission factors.

Permit Number: V-05-067 Page: 13 of 35

# SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

#### b. Sulfur Dioxide:

- i. Compliance with the sulfur dioxide limit is demonstrated while burning natural gas.
- c. For the opacity limit,
  - i. Compliance with the opacity limit is demonstrated while burning natural gas.

# 3. <u>Testing Requirements</u>:

The permittee shall perform emission testing within 60 days of receipt of a written request from the Division. The testing shall be performed in accordance with the applicable methods referenced in 401 KAR 59:010, Section 4.

### 4. **Specific Monitoring Requirements:**

The permittee shall monitor and maintain records of the following information:

- a. The monthly (calendar month) fuel usage rate (cubic feet per month or gallons per month) of the natural gas.
- b. The monthly hours of operation of boiler.

# 5. **Specific Recordkeeping Requirements:**

The permittee shall maintain records of the items listed in **Specific Monitoring Requirements.** 

# **Specific Reporting Requirements:**

Refer to **Section F(5)**.

Permit Number: V-05-067 Page: 14 of 35

# SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

# PA-4 (See Table 4.1) Process Area 4: Acetylene Operations <u>Description:</u>

Construction Commenced: Prior to 1970

Table 4.1 Significant emission points associated with the Acetylene Operations

EP No.	EP Description	Maximum Throughput
		(per year)
EP 126	Wet Slurry Sump	1,080,000 tons slurry
EP 127	Wet Slurry Vat	1,080,000 tons slurry
EP 142	Acetylene Generation System Baghouse #1	123,612 tons carbide
EP 143	Acetylene Generation System Baghouse #2	123,612 tons carbide

# **APPLICABLE REGULATIONS:**

401 KAR 61:020, Existing process operations.

401 KAR 63:010, Fugitive emissions

#### 1. Operating Limitations:

None

## 2. <u>Emission Limitations</u>:

- a. Particulate Limitations:
  - i. for EP 126 and EP 127:

401 KAR 61:020, Section 3(2), particulate emissions based on the process rate of greater than 60,000 lbs/hr shall not exceed the allowable emission rate as calculated by the following formula:

$$E=55.0P^{0.11}-40$$

E = rate of emission of particulate matter in lb/hr

P = process weight rate in (tons/hr) = monthly throughput in tons / monthly hours of operations

#### ii. for EP 142 and EP 143:

401 KAR 61:020, Section 3(2), particulate emissions based on the process rate of 60,000 lbs/hr or less shall not exceed the allowable emission rate as calculated by the following formula:

$$E=4.10P^{0.67}$$

E = rate of emission of particulate matter in lb/hr

P = process weight rate in (tons/hr) = monthly throughput in tons / monthly hours of operations

#### b. Opacity Limitations:

i. 401 KAR 61:020, Section 3(1)(a) the opacity of visible emissions shall not equal or exceed forty (40) percent.

Permit Number: V-05-067 Page: 15 of 35

# SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

### c. Fugitive Limitations:

- i. 401 KAR 63:010, material shall not be handled, processed, transported, or stored without taking reasonable precaution to prevent particulate matter from becoming airborne.
- ii. 401 KAR 63:010, visible fugitive dust emissions shall not be discharged beyond the lot line of the property.

## **Compliance Demonstration Methods:**

#### a. Particulate matter:

Compliance with particulate matter emission limitations specified in 401 KAR 61:020 shall be demonstrated by monitoring the amount and type material (tons per month) added to the emission unit and total hours the unit operated that month.

Compliance with the hourly emission limit shall be determined as follows:

Hourly Emission Rate (lb/hr) = [Monthly material processed (tons/month) x Emission Factor as determined from AP-42 \* (lb/hr) / Hours of operation per month (hrs/month)] x (1 - Control Efficiency)

\* If an Emission Factor other than that taken from AP-42 is used, documentation on how that Emission Factor was derived must be submitted to the Division's Central Office for approval.

# b. Opacity:

Refer to 4. <u>Specific Monitoring Requirements</u> and 5. <u>Specific Recordkeeping</u> Requirements.

### 3. Testing Requirements:

The permittee shall perform emission testing within 60 days of receipt of a written request from the Division. The testing shall be performed in accordance with the applicable methods referenced in 401 KAR 61:020, Section 4.

# 4. **Specific Monitoring Requirements:**

- a. The permittee shall monitor:
  - i. monthly material process rate, and
  - ii. monthly operation hours for each emission unit.
- b. To demonstrate compliance with opacity standards specified in 401 KAR 61:020 the permittee shall:
  - i. perform opacity readings using Reference Method 9 on each stack or vent as requested by the Division.
  - ii. perform qualitative visual observations of the opacity of emissions from each stack/vent biweekly. If visible emissions are observed from any stack/vent during the observations perform opacity readings using Reference Method 9.
- c. The facility shall monitor the pressure drop across the baghouse weekly and assume all parameters remain within the range recommended by the manufacturer and/or standard operating practices.

**Permit Number:** <u>V-05-067</u> **Page:** 16 **of** 35

# SECTION B - EMISSION POINTS, EMISSION UNITS, APPLICABLE REGULATIONS, AND OPERATING CONDITIONS (CONTINUED)

# 5. **Specific Recordkeeping Requirements:**

- a. Monthly records shall be maintained of the following information:
  - i. monthly material process rate, and
  - ii. monthly operation hours for each emission unit.
- b. Weekly logs of the visual inspection, pressure drop monitoring, and the preventative maintenance of the baghouse.

# 6. **Specific Reporting Requirements:**

Refer to **Section F(5)**.

**Permit Number:** <u>V-05-067</u> **Page:** 17 **of** 35

# **SECTION C - INSIGNIFICANT ACTIVITIES**

The following listed activities have been determined to be insignificant activities for this source pursuant to 401 KAR 52:020, Section 6. While these activities are designated as insignificant the permittee must comply with the applicable regulation and some minimal level of periodic monitoring may be necessary.

Description  1. EP1 – unloading of railcar or truck into hopper, 50 tph	Generally Applicable Regulation 401 KAR 63:010 401 KAR 61:020
2. EP2 – transfer point of lime belt conveyor to inlet of bucket elevator, 50 tph	401 KAR 61:020 401 KAR 63:010
3. EP3 – unloading of coke from truck onto coke storage, 50 tph	401 KAR 59:010 401 KAR 63:010
4. EP4 – unloading of coke from railcar or front end loader into hopper, 11 tph	401 KAR 59:010 401 KAR 63:010
5. EP5 – breaking of large coke and Soderberg waste pieces; belt conveyer into open truck or onto coke storage pad, 3 tph	401 KAR 59:010 401 KAR 63:010
6. EP6 – loading of coke fines into collection bin, 1 tph	401 KAR 59:010 401 KAR 63:010
7. EP8 – coke fines storage area (product for sales), 0.174 acres	401 KAR 59:010 401 KAR 63:010
8. EP9 – sized coke storage area (raw material for furnace), 1.012 acres	401 KAR 59:010 401 KAR 63:010
9. EP10 – sized coke working area, 0.141 acres	401 KAR 59:010 401 KAR 63:010
10. EP11 - coke and hydrated lime stockpile (product for sale), 10.3 acres	401 KAR 59:010 401 KAR 63:010
11. EP12 – haul roads, 4 miles of road	401 KAR 61:020
12. EP13 – tote painting and misallaneous building maintenance painting booth, 10 gal/day	
13. EP14 – paste plant 2 <sup>nd</sup> floor ball mill, 1.5 tph	401 KAR 61:020 401 KAR 63:010

**Permit Number:** <u>V-05-067</u> **Page:** 18 **of** 35

<u>Description</u>	Generally Applicable Regulation
14. EP15 – paste plant material handling equipment, standby paste ball mill, 1.5 tph	401 KAR 61:020 401 KAR 63:010
15. EP16 – raw anthracite coal storage pad	401 KAR 61:020
(raw material for calcine), 0.258 acres	401 KAR 63:010
16. EP17 – transfer point from lime weigh belt	401 KAR 61:020
to apron conveyor, 15 tph	401 KAR 63:010
17. EP18 – transfer point from coke weigh belt to apron conveyor, 15 tph	401 KAR 59:010 401 KAR 63:010
to apron conveyor, 13 tpn	401 KAK 03.010
18. EP19 – transfer point apron conveyor to	401 KAR 59:010
inlet of bucket elevator, 15 tph	401 KAR 63:010
19. EP20 – transfer point from discharge of	401 KAR 59:010
elevator to apron conveyor, 15 tph	401 KAR 63:010
20. EP21 – transfer point from apron conveyor	401 KAR 59:010
to vibrating screen, 15 tph	401 KAR 63:010
21. EP22 – dust control on charge mix bin, 15	401 KAR 59:010
tph	401 KAR 63:010
22. EP23 – transfer point bottom of charge mix	401 KAR 59:010
bin to vibrating feeder, 15 tph	401 KAR 63:010
23. EP24 – transfer point form discharge of	401 KAR 59:010
vibrating feeder to circle conveyor, 15 tph	401 KAR 63:010
24. EP25 – transfer point circle conveyor for	401 KAR 59:010
feed chute, 15 tph	401 KAR 63:010
25. EP26 – transfer point circle conveyor for	401 KAR 59:010
feed chute, 15 tph	401 KAR 63:010
26. EP27 – transfer point circle conveyor for	401 KAR 59:010
feed chute, 15 tph	401 KAR 63:010
27. EP28 – transfer point circle conveyor for	401 KAR 59:010
feed chute, 15 tph	401 KAR 63:010

**Permit Number:** <u>V-05-067</u> **Page:** 19 **of** 35

<u>Description</u>	Generally Applicable Regulation
28. EP29 – transfer point circle conveyor for	401 KAR 59:010
feed chute, 15 tph	401 KAR 63:010
20 ED20 transfer point sinds conveyed for	401 VAD 50.010
29. EP30 – transfer point circle conveyor for	401 KAR 59:010
feed chute, 15 tph	401 KAR 63:010
30. EP31 – transfer point circle conveyor for	401 KAR 59:010
feed chute, 15 tph	401 KAR 63:010
reca chate, is tpi	101 111 111 02.010
31. EP32 – transfer point circle conveyor for	401 KAR 59:010
feed chute, 15 tph	401 KAR 63:010
32. EP33 – transfer point circle conveyor for	401 KAR 59:010
feed chute, 15 tph	401 KAR 63:010
33. EP34 – furnace charge mix dust collector	401 KAR 59:010
fan, 15 tph	401 KAR 63:010
24 ED25 frances shares handling dust	401 V A D 50.010
34. EP35 – furnace charge handling dust	401 KAR 59:010
collector fan, 15 tph	401 KAR 63:010
35. EP38 – loading of coke/lime fines into	401 KAR 59:010
collection bin, 3 tph	401 KAR 63:010
contourement, corp.	.01 122 221 001010
36. EP39 – loading of coke/lime fines into	401 KAR 59:010
collection bin, 3 tph	401 KAR 63:010
•	
37. EP44 – air induced cooling on Peck Carrier	401 KAR 59:010
Conveyor, 11.1 tph	401 KAR 63:010
38. EP45 – air induced cooling on Peck Carrier	401 KAR 59:010
Conveyor, 11.1 tph	401 KAR 63:010
39. EP46 – transfer point discharge of #3	401 KAR 59:010
crusher to apron conveyor 14-D, 11.1 tph	401 KAR 63:010
crusher to apron conveyor 14-D, 11.1 tpn	401 KAK 03.010
40. EP47 – transfer point discharge of #4	401 KAR 59:010
crusher to apron conveyor 14-E, 11.1 tph	401 KAR 63:010
erabler to apron conveyor 11 D, 11.1 tpi	101 11111 05.010
41. EP48 – transfer point discharge of apron	401 KAR 59:010
conveyor 14-E to inlet bucket elevator 14-H,	401 KAR 63:010
11.1 tph	

**Permit Number:** <u>V-05-067</u> **Page:** 20 **of** 35

<u>Description</u> 42. EP49 – transfer point discharge of apron conveyor 14-D to inlet bucket elevator 14-A, 11.1 tph	Generally Applicable Regulation 401 KAR 59:010 401 KAR 63:010
43. EP50 – transfer point discharge of 14-Aand 14-H elevators to #1 cooling conveyor, 11.1 tph	401 KAR 59:010 401 KAR 63:010
44. EP51 – transfer point discharge #1 cooling conveyor to #2 cooling conveyor, 11.1 tph	401 KAR 59:010 401 KAR 63:010
45. EP52 – transfer point discharge #2 cooling conveyor to #3 cooling conveyor, 11.1 tph	401 KAR 59:010 401 KAR 63:010
46. EP53 – transfer point discharge #3 cooling conveyor to inlet chute to elevators 14-L and14-M, 11.1 tph	401 KAR 59:010 401 KAR 63:010
47. EP54 – discharge of #1 Hot Carbide Handling Dust Collector dust collector fan, 2,920 scfm	401 KAR 59:010 401 KAR 63:010
48. EP73 – transfer point unloading of railcar to elevator 4B, 15 tph	401 KAR 61:020 401 KAR 63:010
49. EP74 – product transfer point from magnetic separator chute to belt conveyor 15-B1A, 11.1 tph	401 KAR 61:020 401 KAR 63:010
50. EP75 – product transfer point from conveyor 15-B1A to 15-B2A, 11.1 tph	401 KAR 61:020 401 KAR 63:010
51. EP76 – transfer point from conveyor 15-B2A to 15-C1A, 11.1 tph	401 KAR 61:020 401 KAR 63:010
52. EP78 – discharge of Cold Carbide Handling collector fan stack, 8,244 scfm	401 KAR 59:010 401 KAR 63:010
53. EP79 – discharge of #2 Hot Carbide Handling dust collector fan stack, 3,607 scfm	401 KAR 59:010 401 KAR 63:010

<u>Description</u>	Generally Applicable Regulation
54. EP80 – dust pick up at railcar loading	401 KAR 59:010
station, 15 tph	401 KAR 63:010
55. EP81 – product transfer from conveyors to	401 KAR 59:010
surge bin for railcar loading, 15 tph	401 KAR 63:010
surge om for functi foating, 15 tpn	101 11111 05.010
56. EP82 – product transfer from conveyors at	401 KAR 59:010
bottom of carbide storage silos, 15 tph	401 KAR 63:010
57. EP83 – product transfer from conveyors at	401 KAR 59:010
bottom of carbide storage silos, 15 tph	401 KAR 63:010
58. EP84 – product transfer from conveyor 16-	401 KAR 59:010
Cto inlet bucket elevator 16-D, 15 tph	401 KAR 63:010
59. EP85 – product transfer from conveyor 16-	401 KAR 59:010
B to inlet bucket elevator 16-D, 11.1 tph	401 KAR 63:010
60. EP86 – transfer point elevator 16-D to	401 KAR 59:010
conveyor 07-1B, 11.1 tph	401 KAR 63:010
61. EP87 – transfer point conveyor 07-1A to	401 KAR 59:010
conveyor 07-1B, 11.1 tph	401 KAR 63:010
conveyor or 12, 1111 tpn	101 11111 03.010
62. EP88 – transfer point conveyor 07-1A to	401 KAR 59:010
elevator 15-H, 11.1 tph	401 KAR 63:010
-	
63. EP89 – transfer point unit 25 dust collector	401 KAR 59:010
hopper to portable bin, 0.5 tph	401 KAR 63:010
64. EP90 – transfer point unit 24 dust collector	401 KAR 59:010
hopper to portable bin, 0.5 tph	401 KAR 63:010
nopper to portable oni, 0.5 tpi	401 IM (03.010
65. EP91 – transfer point unit 23 dust collector,	401 KAR 59:010
hopper to portable bin, 0.5 tph	401 KAR 63:010
• • •	
66. EP92 – dust pick-up at vibrating feeder,	401 KAR 59:010
11.1 tph	401 KAR 63:010
67. EP93 – dust pick-up at ¼ X 0 crusher, 11.1	401 KAR 59:010
tph	401 KAR 53.010 401 KAR 63:010
thii	TO1 IXAIX 05.010

**Permit Number:** <u>V-05-067</u> **Page:** 22 **of** 35

<u>Description</u>	Generally Applicable Regulation
68. EP94 – product loading into shipping container form East Pack Bin, 5 tph	401 KAR 59:010 401 KAR 63:010
69. EP95 – Sweco vibrating screen product loading into shipping container, 5 tph	401 KAR 59:010 401 KAR 63:010
70. EP96 – Sweco vibrating screen product loading into shipping container, 5 tph	401 KAR 59:010 401 KAR 63:010
71. EP97 – product loading into shipping container from West Pack Bin, 5 tph	401 KAR 59:010 401 KAR 63:010
72. EP106 – discharge of bin vent filter for pneumatic unloading of trucks, 600 scfm	401 KAR 59:010 401 KAR 63:010
73. EP107 – discharge of bin vent filter for pneumatic unloading of trucks, 600 scfm	401 KAR 59:010 401 KAR 63:010
74. EP108 – transfer point at 1-gal drum loading station, 1 tph	401 KAR 59:010 401 KAR 63:010
75. EP109 – transfer point elevator 09-20 to belt conveyor 09-10, 10 tph	401 KAR 59:010 401 KAR 63:010
76. EP110 – transfer point from belt conveyor 09-10 to carbide feed bin 09-03, 10 tph	401 KAR 59:010 401 KAR 63:010
77. EP111 – transfer point ECD loading station, 5 tph	401 KAR 59:010 401 KAR 63:010
78. EP112 – discharge of ECD loading station dust collector fan, 1800 scfm	401 KAR 59:010 401 KAR 63:010
79. EP113 – transfer point oversize from vibrating screen 09-07 to collect drum, 0.25 tph	401 KAR 59:010 401 KAR 63:010
80. EP114 – transfer point desulf loading into rail car, 15 tph	401 KAR 59:010 401 KAR 63:010
81. EP115 – transfer point ECD dust collector loading into collection	401 KAR 59:010 401 KAR 63:010

**Permit Number:** <u>V-05-067</u> **Page:** 23 **of** 35

<u>Description</u>	Generally Applicable Regulation
82. EP116 – transfer point drum loading at #1drum loading station, 1 tph	401 KAR 59:010 401 KAR 63:010
83. EP117 – transfer point drum loading at #2 drum loading station, 1 tph	401 KAR 59:010 401 KAR 63:010
84. EP118 – purging and venting of #1 generator hopper, 3 tph	401 KAR 59:010 401 KAR 63:010
85. EP 119 – purging and venting of #2 generator vent filter discharge, 3 tph	401 KAR 59:010 401 KAR 63:010
86. EP120 – acetylene released from condensate removed from customer pipe line pot, fugitive – 5 gal water collected over 8 hour shift	401 KAR 63:010
87. EP121 – acetylene released from condensate removed from customer pipe line #2 drip pot – 5 gal water per 8 hour shift	401 KAR 63:010
88. EP122 – acetylene released from condensate removed from customer pipe line #3 drip pot – 5 gal water per 8 hour shift	401 KAR 63:010
89. EP123 – acetylene released from condensate removed from customer pipe line #4 drip pot – 5 gal water per 8 hour shift	401 KAR 63:010
90. EP124 – acetylene released from condensate removed from customer pipe line #5 drip pot – 5 gal water per 8 hour shift	401 KAR 63:010
91. EP125 – acetylene released from water seal on gas holding tank, no applicable capacity	401 KAR 63:010
92. EP129 – gasoline storage tank (500 gal) used for plant mobile equipment	N/A

Permit Number: V-05-067 Page: 24 of 35

<u>Description</u>	Generally Applicable Regulation
93. EP130 – diesel storage tank (1,000 gal) used for plant mobile equipment	N/A
94. EP131 – diesel storage tank (500 gal) used for backup motors on water pumps	N/A
95. EP132 – diesel storage tank (75 gal) used for backup motors on water pumps	N/A
96. EP135 – paste plant transfer point at	401 KAR 61:020
railcar unloading station, 15 tph	401 KAR 63:010
97. EP136 – paste plant transfer point	401 KAR 61:020
at tote unloading station, 5 tph	401 KAR 63:010
00 FP107	401 WAR 61 000
98. EP137 – paste plant transfer at railcar unloading station, 15 tph	401 KAR 61:020 401 KAR 63:010
ranear unloading station, 13 tpi	401 KAK 03.010
99. EP138 – paste plant transfer point	401 KAR 61:020
at bag loading station, 1 tpy	401 KAR 63:010
100 ED120	401 KAD (1,020
100. EP139 – paste plant transfer point at bag loading station, 1 tpy	401 KAR 61:020 401 KAR 63:010
at bag foating station, 1 tpy	401 KAK 03.010
101. EP140 – paste dept. dust collector	401 KAR 61:020
fan discharge, 5 tpy	401 KAR 63:010
102 FD144	404 774 75 64 626
102. EP141 – paste plant ventilation fan,	401 KAR 61:020
5000 scfm	401 KAR 63:010

**Permit Number:** <u>V-05-067</u> **Page:** 25 **of** 35

# SECTION D - SOURCE EMISSION LIMITATIONS AND TESTING REQUIREMENTS

1. As required by Section 1b of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26; compliance with annual emissions and processing limitations contained in this permit, shall be based on emissions and processing rates for any twelve (12) consecutive months.

2. *PM*, *Opacity*, *SO*<sub>2</sub>, and CO emissions, measured by applicable reference methods, or an equivalent or alternative method specified in 40 C.F.R. Chapter I, or by a test method specified in the State Implementation Plan shall not exceed the respective limitations specified herein.

Permit Number: V-05-067 Page: 26 of 35

# **SECTION E - SOURCE CONTROL EQUIPMENT REQUIREMENTS**

1. Pursuant to 401 KAR 50:055, Section 2(5), at all times, including periods of startup, shutdown and malfunction, owners and operators shall, to the extent practicable, maintain and operate any affected facility including associated air pollution control equipment in a manner consistent with good air pollution control practice for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Division which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

Permit Number: V-05-067 Page: 27 of 35

# SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

- 1. Pursuant to Section 1b (IV)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26, when continuing compliance is demonstrated by periodic testing or instrumental monitoring, the permittee shall compile records of required monitoring information that include:
  - a. Date, place as defined in this permit, and time of sampling or measurements;
  - b. Analyses performance dates;
  - c. Company or entity that performed analyses;
  - d. Analytical techniques or methods used;
  - e. Analyses results; and
  - f. Operating conditions during time of sampling or measurement.
- 2. Records of all required monitoring data and support information, including calibrations, maintenance records, and original strip chart recordings, and copies of all reports required by the Division for Air Quality, shall be retained by the permittee for a period of five years and shall be made available for inspection upon request by any duly authorized representative of the Division for Air Quality [Sections 1b(IV) 2 and 1a(8) of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- 3. In accordance with the requirements of 401 KAR 52:020 Section 3(1)h the permittee shall allow authorized representatives of the Cabinet to perform the following during reasonable times:
  - a. Enter upon the premises to inspect any facility, equipment (including air pollution control equipment), practice, or operation;
  - b. To access and copy any records required by the permit:
  - c. Sample or monitor, at reasonable times, substances or parameters to assure compliance with the permit or any applicable requirements.

Reasonable times are defined as during all hours of operation, during normal office hours; or during an emergency.

- 4. No person shall obstruct, hamper, or interfere with any Cabinet employee or authorized representative while in the process of carrying out official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.
- 5. Summary reports of any monitoring required by this permit, other than continuous emission or opacity monitors, shall be submitted to the Regional Office listed on the front of this permit at least every six (6) months during the life of this permit, unless otherwise stated in this permit. For emission units that were still under construction or which had not commenced operation at the end of the 6-month period covered by the report and are subject to monitoring requirements in this permit, the report shall indicate that no monitoring was performed during the previous six months because the emission unit was not in operation [Section 1b (V)1 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

**Permit Number:** <u>V-05-067</u> **Page:** 28 **of** 35

# SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

- 6. The semi-annual reports are due by January 30th and July 30th of each year. Data from the continuous emission and opacity monitors shall be reported to the Technical Services Branch in accordance with the requirements of 401 KAR 59:005, General Provisions, Section 3(3). All reports shall be certified by a responsible official pursuant to 401 KAR 52:020 Section 23. All deviations from permit requirements shall be clearly identified in the reports.
- 7. In accordance with the provisions of 401 KAR 50:055, Section 1 the owner or operator shall notify the Regional Office listed on the front of this permit concerning startups, shutdowns, or malfunctions as follows:
  - a. When emissions during any planned shutdowns and ensuing startups will exceed the standards, notification shall be made no later than three (3) days before the planned shutdown, or immediately following the decision to shut down, if the shutdown is due to events which could not have been foreseen three (3) days before the shutdown.
  - b. When emissions due to malfunctions, unplanned shutdowns and ensuing startups are or may be in excess of the standards, notification shall be made as promptly as possible by telephone (or other electronic media) and shall be submitted in writing upon request.
- 8. The owner or operator shall report emission related exceedances from permit requirements including those attributed to upset conditions (other than emission exceedances covered by Section F.7. above) to the Regional Office listed on the front of this permit within 30 days. Other deviations from permit requirements shall be included in the semiannual report required by Section F.6 [Section 1b (V) 3, 4. of the Cabinet Provisions and Procedures for Issuing Title V Permits incorporated by reference in 401 KAR 52:020, Section 26].
- 9. Pursuant to 401 KAR 52:020, Permits, Section 21, the permittee shall annually certify compliance with the terms and conditions contained in this permit, by completing and returning a Compliance Certification Form (DEP 7007CC) (or an alternative approved by the regional office) to the Regional Office listed on the front of this permit and the U.S. EPA in accordance with the following requirements:
  - a. Identification of the term or condition;
  - b. Compliance status of each term or condition of the permit;
  - c. Whether compliance was continuous or intermittent;
  - d. The method used for determining the compliance status for the source, currently and over the reporting period.
  - e. For an emissions unit that was still under construction or which has not commenced operation at the end of the 12-month period covered by the annual compliance certification, the permittee shall indicate that the unit is under construction and that compliance with any applicable requirements will be demonstrated within the timeframes specified in the permit.

Permit Number: V-05-067 Page: 29 of 35

# SECTION F - MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS (CONTINUED)

f. The certification shall be postmarked by January 30th of each year. Annual compliance certifications should be mailed to the following addresses:

Division for Air Quality Paducah Regional Office 4500 Clarks River Road Paducah, KY 42003-0823 U.S. EPA Region 4 Air Enforcement Branch Atlanta Federal Center 61 Forsyth St. Atlanta, GA 30303-8960

Division for Air Quality Central Files 803 Schenkel Lane Frankfort, KY 40601

- 10. In accordance with 401 KAR 52:020, Section 22, the permittee shall provide the Division with all information necessary to determine its subject emissions within thirty (30) days of the date the KYEIS emission survey is mailed to the permittee.
- 11. Results of performance test(s) required by the permit shall be submitted to the Division by the source or its representative within forty-five days or sooner if required by an applicable standard, after the completion of the fieldwork.

**Permit Number:** <u>V-05-067</u> **Page:** 30 **of** 35

### **SECTION G - GENERAL PROVISIONS**

(a) <u>General Compliance Requirements</u>

1. The permittee shall comply with all conditions of this permit. Noncompliance shall be a violation of 401 KAR 52:020 and of the Clean Air Act and is grounds for enforcement action including but not limited to termination, revocation and reissuance, revision or denial of a permit [Section 1a, 3 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020 Section 26].

- 2. The filing of a request by the permittee for any permit revision, revocation, reissuance, or termination, or of a notification of a planned change or anticipated noncompliance, shall not stay any permit condition [Section 1a, 6 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- 3. This permit may be revised, revoked, reopened and reissued, or terminated for cause in accordance with 401 KAR 52:020, Section 19. The permit will be reopened for cause and revised accordingly under the following circumstances:
  - a. If additional applicable requirements become applicable to the source and the remaining permit term is three (3) years or longer. In this case, the reopening shall be completed no later than eighteen (18) months after promulgation of the applicable requirement. A reopening shall not be required if compliance with the applicable requirement is not required until after the date on which the permit is due to expire, unless this permit or any of its terms and conditions have been extended pursuant to 401 KAR 52:020, Section 12;
  - b. The Cabinet or the U. S. EPA determines that the permit must be revised or revoked to assure compliance with the applicable requirements;
  - c. The Cabinet or the U. S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit;

Proceedings to reopen and reissue a permit shall follow the same procedures as apply to initial permit issuance and shall affect only those parts of the permit for which cause to reopen exists. Reopenings shall be made as expeditiously as practicable. Reopenings shall not be initiated before a notice of intent to reopen is provided to the source by the Division, at least thirty (30) days in advance of the date the permit is to be reopened, except that the Division may provide a shorter time period in the case of an emergency.

- 4. The permittee shall furnish information upon request of the Cabinet to determine if cause exists for modifying, revoking and reissuing, or terminating the permit; or to determine compliance with the conditions of this permit [Section 1a, 7,8 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- 5. The permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such facts or corrected information to the permitting authority [401 KAR 52:020, Section 7(1)].

**Permit Number:** <u>V-05-067</u> **Page:** 31 **of** 35

# **SECTION G - GENERAL PROVISIONS (CONTINUED)**

6. Any condition or portion of this permit which becomes suspended or is ruled invalid as a result of any legal or other action shall not invalidate any other portion or condition of this permit [Section 1a, 14 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].

- 7. The permittee shall not use as a defense in an enforcement action the contention that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance [Section 1a, 4 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- 8. Except for requirements identified in this permit as state-origin requirements, all terms and conditions shall be enforceable by the United States Environmental Protection Agency and citizens of the United States [Section 1a, 15 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- 9. This permit shall be subject to suspension if the permittee fails to pay all emissions fees within 90 days after the date of notice as specified in 401 KAR 50:038, Section 3(6) [Section 1a, 10 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- 10. Nothing in this permit shall alter or affect the liability of the permittee for any violation of applicable requirements prior to or at the time of permit issuance [401 KAR 52:020, Section 11(3)(b)].
- 11. This permit does not convey property rights or exclusive privileges [Section 1a, 9 of the *Cabinet Provisions and Procedures for Issuing Title V Permits* incorporated by reference in 401 KAR 52:020, Section 26].
- 12. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits, licenses, or approvals required by the Kentucky Cabinet for Environmental and Public Protection or any other federal, state, or local agency.
- 13. Nothing in this permit shall alter or affect the authority of U.S. EPA to obtain information pursuant to Federal Statute 42 USC 7414, Inspections, monitoring, and entry [401 KAR 52:020, Section 11(3)(d)].
- 14. Nothing in this permit shall alter or affect the authority of U.S. EPA to impose emergency orders pursuant to Federal Statute 42 USC 7603, Emergency orders [401 KAR 52:020, Section 11(3)(a)].
- 15. This permit consolidates the authority of any previously issued PSD, NSR, or Synthetic Minor source preconstruction permit terms and conditions for various emission units and incorporates all requirements of those existing permits into one single permit for this source.

**Permit Number:** V-05-067 **Page:** 32 **of** 35

# **SECTION G - GENERAL PROVISIONS (CONTINUED)**

16. Pursuant to 401 KAR 52:020, Section 11, a permit shield shall not protect the owner or operator from enforcement actions for violating an applicable requirement prior to or at the time of issuance. Compliance with the conditions of a permit shall be considered compliance with:

- a. Applicable requirements that are included and specifically identified in the permit and
- b. Non-applicable requirements expressly identified in this permit.
- 17. Pursuant to 401 KAR 50:045, Section 2, a source required to conduct a performance test shall submit a completed Compliance Test Protocol form, DEP form 6028, or a test protocol a source has developed for submission to other regulatory agencies, in a format approved by the cabinet, to the Division's Frankfort Central Office a minimum of sixty (60) days prior to the scheduled test date. Pursuant to 401 KAR 50:045, Section 7, the Division shall be notified of the actual test date at least Thirty (30) days prior to the test.

### (b) Permit Expiration and Reapplication Requirements

- 1. This permit shall remain in effect for a fixed term of five (5) years following the original date of issue. Permit expiration shall terminate the source's right to operate unless a timely and complete renewal application has been submitted to the Division at least six months prior to the expiration date of the permit. Upon a timely and complete submittal, the authorization to operate within the terms and conditions of this permit, including any permit shield, shall remain in effect beyond the expiration date, until the renewal permit is issued or denied by the Division [401 KAR 52:020, Section 12].
- 2. The authority to operate granted shall cease to apply if the source fails to submit additional information requested by the Division after the completeness determination has been made on any application, by whatever deadline the Division sets [401 KAR 52:020 Section 8(2)].

### (c) Permit Revisions

- 1. A minor permit revision procedure may be used for permit revisions involving the use of economic incentive, marketable permit, emission trading, and other similar approaches, to the extent that these minor permit revision procedures are explicitly provided for in the SIP or in applicable requirements and meet the relevant requirements of 401 KAR 52:020, Section 14(2).
- 2. This permit is not transferable by the permittee. Future owners and operators shall obtain a new permit from the Division for Air Quality. The new permit may be processed as an administrative amendment if no other change in this permit is necessary, and provided that a written agreement containing a specific date for transfer of permit responsibility coverage and liability between the current and new permittee has been submitted to the permitting authority within ten (10) days following the transfer.

**Permit Number:** <u>V-05-067</u> **Page:** 33 **of** 35

# **SECTION G - GENERAL PROVISIONS (CONTINUED)**

(d) <u>Construction, Start-Up, and Initial Compliance Demonstration Requirements</u> None

## (e) <u>Acid Rain Program Requirements</u>

If an applicable requirement of Federal Statute 42 USC 7401 through 7671q (the Clean Air Act) is more stringent than an applicable requirement promulgated pursuant to Federal Statute 42 USC 7651 through 7651o (Title IV of the Act), both provisions shall apply, and both shall be state and federally enforceable.

# (f) <u>Emergency Provisions</u>

- 1. Pursuant to 401 KAR 52:020 Section 24(1), an emergency shall constitute an affirmative defense to an action brought for the noncompliance with the technology-based emission limitations if the permittee demonstrates through properly signed contemporaneous operating logs or relevant evidence that:
  - a. An emergency occurred and the permittee can identify the cause of the emergency;
  - b. The permitted facility was at the time being properly operated;
  - c. During an emergency, the permittee took all reasonable steps to minimize levels of emissions that exceeded the emissions standards or other requirements in the permit; and
  - d. Pursuant to 401 KAR 52:020, 401 KAR 50:055, and KRS 224.01-400, the permittee notified the Division as promptly as possible and submitted written notice of the emergency to the Division when emission limitations were exceeded due to an emergency. The notice shall include a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
  - e. This requirement does not relieve the source of other local, state or federal notification requirements.
- 2. Emergency conditions listed in General Condition (f)1 above are in addition to any emergency or upset provision(s) contained in an applicable requirement [401 KAR 52:020, Section 24(3)].
- 3. In an enforcement proceeding, the permittee seeking to establish the occurrence of an emergency shall have the burden of proof [401 KAR 52:020, Section 24(2)].

### (g) <u>Risk Management Provisions</u>

1. The permittee shall comply with all applicable requirements of 401 KAR Chapter 68, Chemical Accident Prevention, which incorporates by reference 40 CFR Part 68, Risk Management Plan provisions. If required, the permittee shall comply with the Risk Management Program and submit a Risk Management Plan to:

RMP Reporting Center P.O. Box 1515 Lanham-Seabrook, MD 20703-1515. **Permit Number:** <u>V-05-067</u> **Page:** 34 **of** 35

# **SECTION G - GENERAL PROVISIONS (CONTINUED)**

2. If requested, submit additional relevant information to the Division or the U.S. EPA.

## (h) Ozone depleting substances

- 1. The permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 CFR 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
  - a. Persons opening appliances for maintenance, service, repair, or disposal shall comply with the required practices contained in 40 CFR 82.156.
  - b. Equipment used during the maintenance, service, repair, or disposal of appliances shall comply with the standards for recycling and recovery equipment contained in 40 CFR 82.158.
  - c. Persons performing maintenance, service, repair, or disposal of appliances shall be certified by an approved technician certification program pursuant to 40 CFR 82.161.
  - d. Persons disposing of small appliances, MVACs, and MVAC-like appliances (as defined at 40 CFR 82.152) shall comply with the recordkeeping requirements pursuant to 40 CFR 82.166
  - e. Persons owning commercial or industrial process refrigeration equipment shall comply with the leak repair requirements pursuant to 40 CFR 82.156.
  - f. Owners/operators of appliances normally containing 50 or more pounds of refrigerant shall keep records of refrigerant purchased and added to such appliances pursuant to 40 CFR 82.166.
- 2. If the permittee performs service on motor (fleet) vehicle air conditioners containing ozone-depleting substances, the source shall comply with all applicable requirements as specified in 40 CFR 82, Subpart B, Servicing of Motor Vehicle Air Conditioners.

**Permit Number:** <u>V-05-067</u> **Page:** 35 **of** 35

# **SECTION H - ALTERNATE OPERATING SCENARIOS**

Not Applicable

# **SECTION I - COMPLIANCE SCHEDULE**

Not Applicable

# **SECTION J - ACID RAIN**

Not Applicable

# SECTION K - NOx BUDGET

Not Applicable